

THE AMERICAN GENERA OF ASILIDAE (DIPTERA): KEYS FOR IDENTIFICATION WITH AN ATLAS OF FEMALE SPERMATHECAE AND OTHER MORPHOLOGICAL DETAILS.
V. SUBFAMILY STICHOPOGONINAE G.H. HARDY*

Los géneros americanos de Asilidae (Diptera): Clave para su identificación con un atlas de la espermateca de las hembras y otros detalles morfológicos. V. Subfamilia Stichopogoninae G.H. Hardy.

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RESUMEN

Se presenta una clave para la identificación de los cinco géneros americanos de Stichopogoninae G.H. Hardy, con ilustraciones de espermatecas y otros detalles morfológicos. *Argyropogon argentinus*, gen. n., sp. n., es descrito (localidad-tipo: Argentina, Prov. de Santa Cruz, Piedrabuena). Se adiciona un catálogo de las especies neotropicales.

ABSTRACT

A key for the identification of the five American genera of Stichopogoninae G.H. Hardy is presented, with illustrations of spermathecae and other morphological details. *Argyropogon argentinus*, gen. n., sp. n., is described (type-locality: Argentina, Santa Cruz Prov. Piedrabuena). A catalogue of the Neotropical species is given.

KEYWORDS: Insecta. Taxonomy. America. Key. Asilidae. Stichopogoninae.

INTRODUCTION

This is the Part V of a serie of papers intended as a preliminary effort to define the American ge-

nera of Asilidae, describing the new genera, preparatory to the elaboration of the catalogue of Neotropical species for inclusion in the forthcoming World Catalogue of Flies, now being prepared by the U.S. Department of Agriculture and the U.S. National Museum of Natural History, Washington, D.C.

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MATERIAL AND METHODS

The material used in this serie belongs to the Museu de Zoología da Universidade de São Paulo, Brasil, and to the Departamento de Zoología, Universidad de Concepción, Chile (MZUC).

The methodology employed in the dissection and preservation of the male terminalia, female spermathecae and other morphological details is the same employed by Artigas (1971).

KEY TO THE AMERICAN GENERA

- 1. Face strongly inflated on its lower 3/4. Hairs of mystax occupying lower half of face or more. Postmetacoxal bridge absent. Epandrial halves separated, triangular and curved. Spermathecae extending only up to base of abdominal segment 7 (Figs. 1-2). (Holarctic, Oriental).....*Lasiopogon* Loew, 1847.
- Face flat or slightly convex, as seen in profile. Hairs of mystax confined to lower margin of face, more or less tectiform. Postmetacoxal bridge present or absent. Epandrial halves completely fused, forming a single, characteristically trapezoidal plate..... 2
- 2(1). Vein M₃ present from discoidal cell to wing margin (i. e., five posterior cells present). Spermathecae extending only up to abdominal segments 7 or 6 3.
- Vein M₃ absent beyond discoidal cell (i. e., only four posterior cells present). Spermathecae very long and slender, extending up to base of abdominal segment 4 (Figs. 3-4). Exceptionally minute flies. Head subglobular in lateral view. Mystax sparse, consisting of five or six pairs of widely spaced, slender bristles in a transverse row. Proboscis short. Postmetacoxal bridge present (Neotropical)*Townsendia* Williston, 1895
- 3(2). Antennal flagellum elongate, longer than scape and pedicel together. Face flat, either swollen or flat on oral margin, mystax confined to lower half of face or to subcranial margin 4.
- Antennal flagellum globular, shorter than pedicel and scape together, with a bristle-like style at its apex, as long as flagellum. Face either covered with hairs or lower face hairy and a patch of hairs below antennae. Postmetacoxal bridge absent. Spermathecae as in Figs. 17-18 (Mexico to s. Peru)*Lissoteles* Bezzi, 1910.
- 4(3). Very small flies (4-5 mm long). Mystax with several rows limited to lower half of face. Both frons and ocellar tubercle with bristles. Mesonotum with well developed acrostichal, dorsocentral and supraalar bristles. Margin of scutellum with several upturned bristles and hairs. Anepisternum with at least two strong bristles. Apical superior surface of femora and all tibiae with long, stiff bristles. Postmetacoxal bridge absent. Male terminalia as in Figs. 10-12. Female abdomen and spermathecae as in Figs. 13-14 (Argentina: Santa Cruz Prov.) ...*Argyropogon*, gen. n.
- Larger (more than 6 mm) flies, with bare body. Mystax a dense row of tectiform bristles confined to subcranial margin. No bristles on front, ocellar tubercle and mesonotum (except for bristles on humeri and postalar calli). Scutellar margin bare. Anepisternal bristles absent. No bristles on apical superior surface of femora and tibial bristles scanty, short. Postmetacoxal bridge present. Spermathecae as in Figs. 15-16. (Cosmopolitan)*Stichopogon* Loew, 1847.

Argyropogon, gen. n.

Total length, 4-5 mm; wing length, 2.5-3mm.

Head almost globular in lateral view, the eye very large, with receding posterior margin, especially below, leaving a wide postocular and genal area (Fig. 5). Face flat, slightly bulging at lower half, mystax composed of several rows of short, stiff bristles, as long as flagellum, restricted to lower half of face, some of the bristles extending down genal area, below lower margin of eye. Frons very wide (Fig. 6), with 4-5 proclinate short bristles near eye margin, and one bristle more internally placed. Ocellar tubercle with a small group of shorter bristles, directed forward. Occiput moderately swollen, with stiff bristles above and dense, fine pilosity below, the pile extending anteriorad to posterior margin of eye. Proboscis short, reaching tip of bristles of mystax, with a few hairs below at base. Palpi short, two segmented. Scape short, pedicel 1.5 times as long as scape; flagellum elongate, with two flagellomeres, the first over twice as long as pedicel; second flagellomere ending into an elongate, short, bristle-like style (Fig. 7); a few short bristles below and above on scape and pedicel.

Prosternum completely fused to proepisternum. Mesonotum moderately convex, with full complement of bristles: a small group on humeri, dorsocentral row with at least 4 very strong bristles, acrostichals well developed, supraalar, postalar and several marginal scutellar bristles present, in addition to the short pilosity (Fig. 8). Anepisternum with at least 2 developed bristles. Katatergite with a vertical row of 5-6 bristles. Thorax entirely pollinose.

Wing with all cells open, except for cell cup.

Abdomen dorsoventrally flattened, with 8 segments, as wide as thorax in males, wider (especially at level of tergites 3-4) in females, entirely pollinose and short pilose on dorsal surface, bare and shining on ventral surface. Tergite 1 with one lateral bristle. Male terminalia as in Figs. 10-12. Female abdomen and spermathecae as in Figs. 13-14.

Type-species, *Argyropogon argentinus*, sp. n.

Argyropogon argentinus, sp. n.

An entirely black species, with yellow legs. Body entirely covered by yellowish-grey pollinosity, seeming silvery under certain lights, except on ventral surface of abdomen. All hairs and bristles white. Apical two tarsomeres of all legs darkened; pulvilli white, claws black. Wing hyaline, veins yellow. Halter with darkened stem and ivory knob. Scape and pedicel yellow, flagellum black. Dorsum of abdomen entirely pollinose, under certain lights with a longitudinal black line; lateroposterior margins of tergites with a short, brownish line; venter shining dark-brown. **Holotype** ♂, ARGENTINA, *Santa Cruz*: 5 km. nw. Piedrabuena, 130 m, 25.xi.1966 (E. I. Schlinger & M. Irwin), in the Departamento de Zoología, Facultad de Ciencias Biológicas, Universidad de Concepción (MZUC).

Paratypes: 1♂, same data as holotype, MZUC; 1♂ and 3♀ (MZUC) and 2♀ (in the Museu de Zoologia, Universidade de São Paulo), from Argentina, *Santa Cruz*, 2 km s. Caleta Olivia, 12.xii.1966 (E. I. Schlinger & M. Irwin).

Genus *Lissoteles* Bezzi

Lissoteles Bezzi, 1910: 177. Type-species, *hermanni* Bezzi (orig. des.).
Ref. - Martin, 1961 (rev).

- acapulcae* Martin, 1961: 7, fig. 2. Type-locality: Mexico, Guerrero, Acapulco. Distr. - Mexico (Guerrero). HT ♂ UCB.
- aquilonius* Martin, 1961: 8, fig. 3. Type-locality: Mexico, Nayarit, San Blas. Distr. Mexico (Nayarit, Sonora, Sinaloa, Baja California). HT ♂ AMNH.
- austrinus* Martin, 1961: 10. Type-locality: Peru, Tumbes, 10 mi. s. Zorritos. Distr. - Peru (Tumbes). HT ♀ CAS.
- autumnalis* Martin, 1961: 11. Type-locality: Mexico, Jalisco, Tenacatito Bay. Distr. Mexico (Jalisco). HT ♀ AMNH.

- capronae* Martin, 1961: 12 Type-locality: Honduras, Tegucigalpa. Distr. - Honduras. HT ♀ AMNH.
- fernandezii* Kaletta, 1976: 67. Type-locality: Venezuela, Miranda, Páez, Machurucuto. Distr. - Venezuela (Miranda). HT♂ FAUCV.
- hermanni* Bezzi, 1910: 178. Type-locality: "Panama". Distr. - Panama. TP ?
- vanduzeei* Cole, 1923: 465, fig. 7. Type-locality: Mexico, Baja California, Angeles Bay and San Francisquito Bay. Distr. Mexico (Baja California). HT ♂ CAS.

Genus *Stichopogon* Loew

- Dasyopogon*, subg. *Stichopogon* Loew, 1847: 499. Type-species, *elegantulus* Wiedemann (sub. des., Back, 1909: 332).
- Neopogon* Bezzi, 1910: 147. Type-species, *Dasyopogon trifasciatus* Say (orig. des.).
- catulus* Osten Sacken, 1887: 170. Type-locality: Mexico, northern Sonora. Distr. - Mexico (Sonora), USA (Arizona). HT ♂ BMNH.
- schnusei* (Bezzi), 1910: 151 (*Neopogon*). Type-locality: Peru, Cuzco, Rosalina, near Paso de Lares, Urubamba R. Distr. - Peru - (Cuzco). TP ?
- trifasciatus* (Say), 1823: 51 (1859: 64) (*Dasyopogon*). Type-locality: USA, Pennsylvania. Distr. - USA, Mexico. TP lost.
- candidus* Macquart, 1846: 195 (1846: 67) (*Dasyopogon*). Type-locality: Mexico, Veracruz. TP lost.
- plagiata* Walker, 1848: 223 (*Thereva*). Type-locality: USA, Massachusetts. HT BMNH.
- fasciventris* Macquart, 1850: 373 (1850: 69), pl. 6, fig. 13 (*Dasyopogon*). Type-locality: "Mexico". HT OXF.
- gelascens* Walker, 1860: 277 (*Dasyopogon*). Type-locality: USA, Massachusetts. HT BMNH.
- snowii* Bezzi, 1910: 149. Type-locality: USA, Kansas, Wallace Co. HT MC SNM.
- venezuelanus* (Kaletta), 1976: 69 (*Neopogon*). Type-locality: Venezuela, Miranda, Paz Castillo, Qda. Soapire. Distr. - Venezuela (Miranda). HT ♂ FAUCV. N. COMB.

Genus *Townsendia* Williston

- Townsendia* Williston, 1895: 107. Type-species, *minuta* Williston (mon.). Ref. - Martin, 1966 (key to Mexican species).
- albomacula* Martin, 1966: 545, figs. 1, 9, 10. Type-locality: Mexico, Nayarit, San Blás. Distr. - Mexico (Colima, Guerrero, Nayarit, Sinaloa). HT ♂ UK.
- araguensis* Kaletta, 1976: 71. Type-locality: Venezuela, Aragua, San Sebastián. Distr. - Venezuela (Aragua). HT ♀ FAUCV.
- argyrata* Curran, 1926: 1. Type-locality: Puerto Rico, Loquillo National Park. Distr. - Puerto Rico. HT AMNH.
- dilata* Martin, 1966: 546, figs. 2, 5-6. Type-locality: Mexico, Veracruz, Veracruz. Distr. - Mexico (Veracruz). HT ♂ USNM.
- fiebrigii* Bezzi, 1910: 629., fig. Type-locality: "Paraguay". Distr. - Paraguay. HT ?
- gracilis* Martin, 1966: 547, figs. 11-12. Type-locality: Mexico, Veracruz, Veracruz. Distr. - Mexico (Veracruz). HT ♂ USNM.
- minuta* Williston, 1895: 108. Type-locality: "Mexico". Distr. - Mexico. LT BMNH.
- nemacula* Martin, 1966: 549, figs. 7-8. Type-locality: Mexico, Oaxaca, 17 mi. e. of Juchitán. Distr. - Mexico (Oaxaca). HT ♀ UK.
- podexargentea* Enderlein, 1914: 167. Type-locality: "Costa Rica". Distr. - Costa Rica. HT CRAC.
- triangulata* Martin, 1966: 550, figs. 3-4. Type-locality: Mexico, Puebla, 3 mi. west of, 1 mi. s. of Izúcar de Matamoros. HT ♀ UK.

Abbreviations

AMNH : American Museum of Natural History, New York
BMNH : British Museum of Natural History, London
CAS : California Academy of Sciences. San Francisco
CRAC : Polish Institute of Sciences, Cracovia

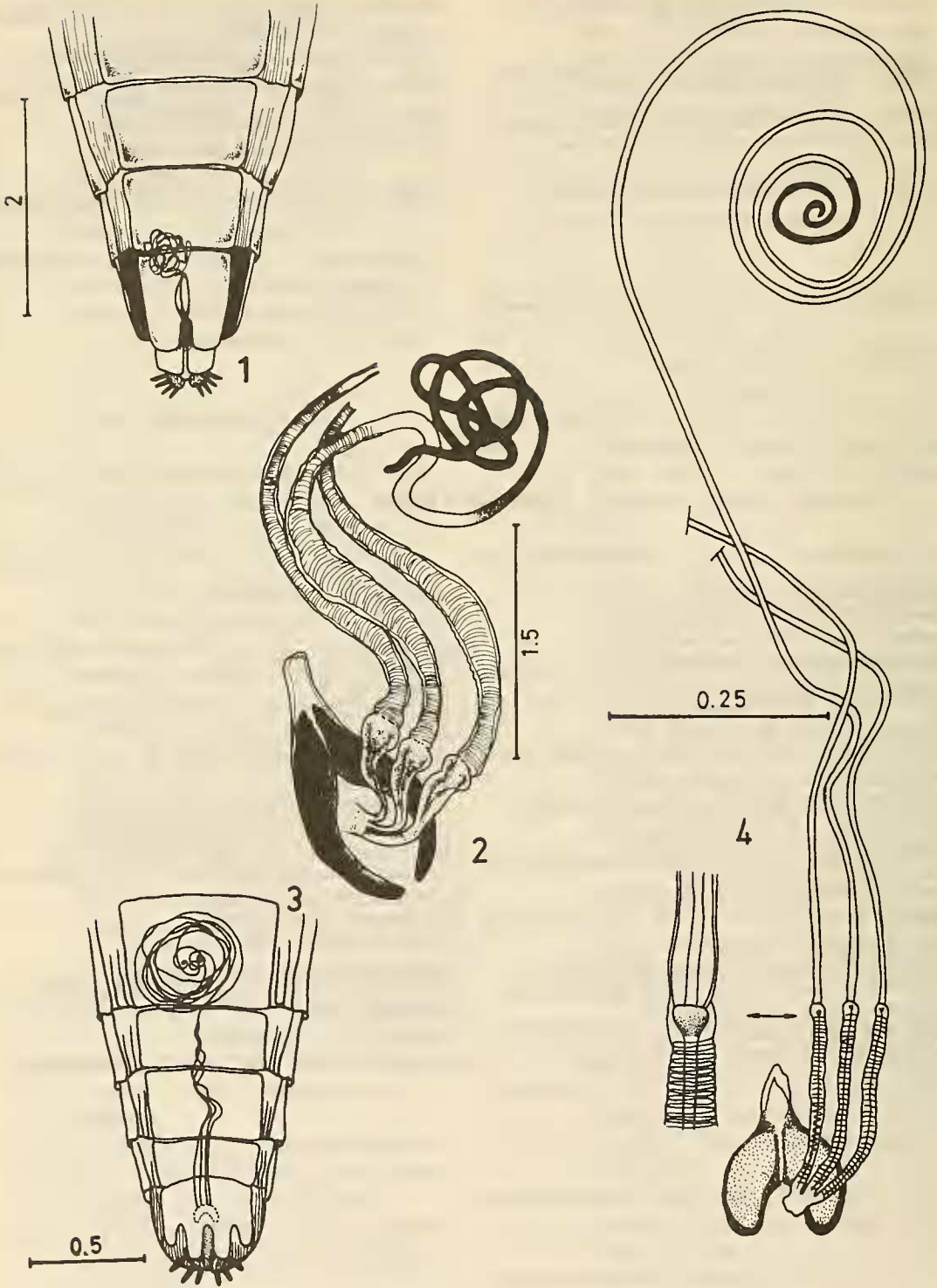
FAUCV : Facultad de Agronomía, Universidad Central de VENEZUELA
MCSNM : Museo Civico di Storia Naturale, Milano
MZUC : Museo de Zoología, Universidad de Concepción, Concepción, Chile
OXF : Hope Museum, Oxford University
UCB : University of California, Berkeley
UK : University of Kansas, Lawrence
USNM : U.S. National Museum, Washington D.C.

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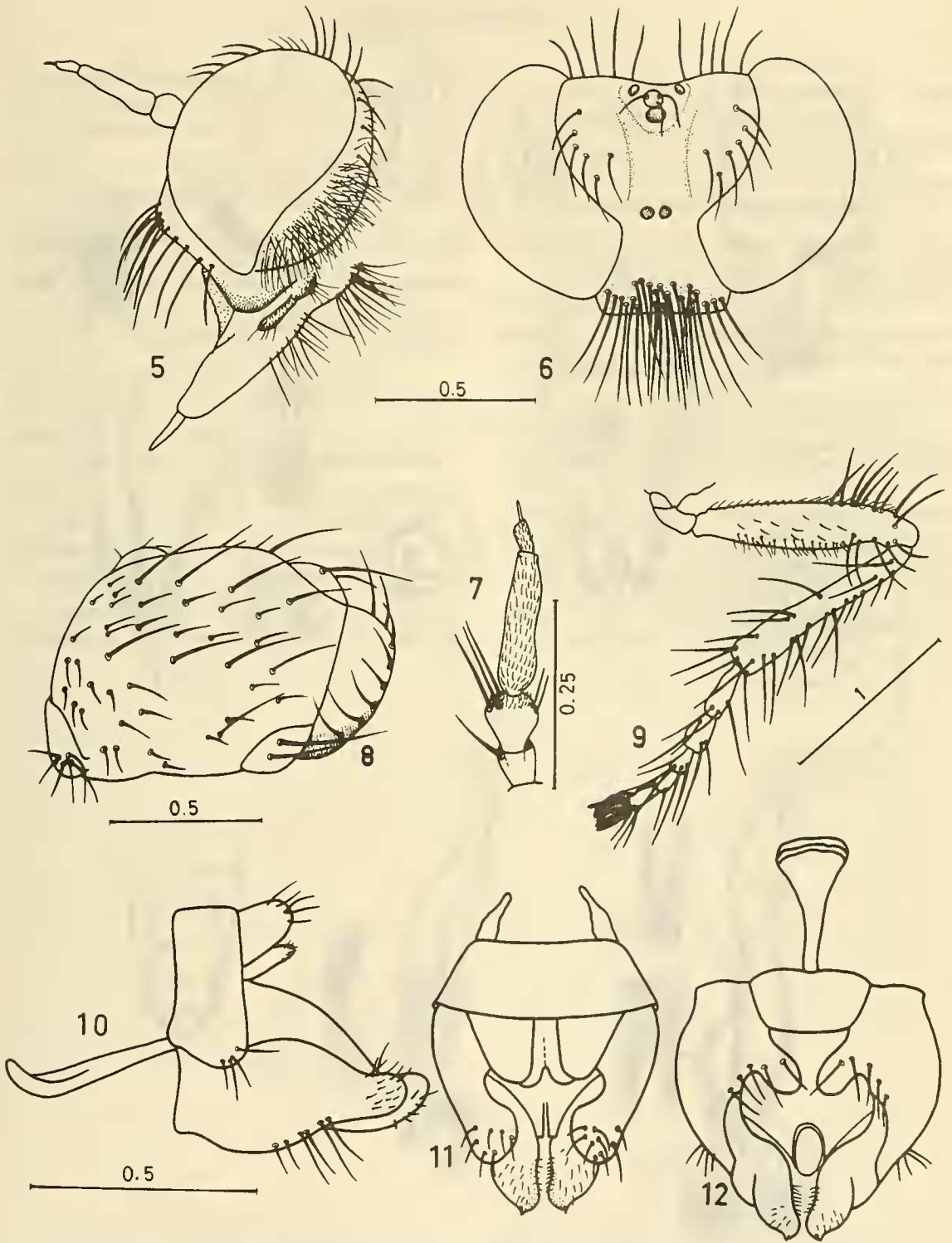
(Synonyms in italics)

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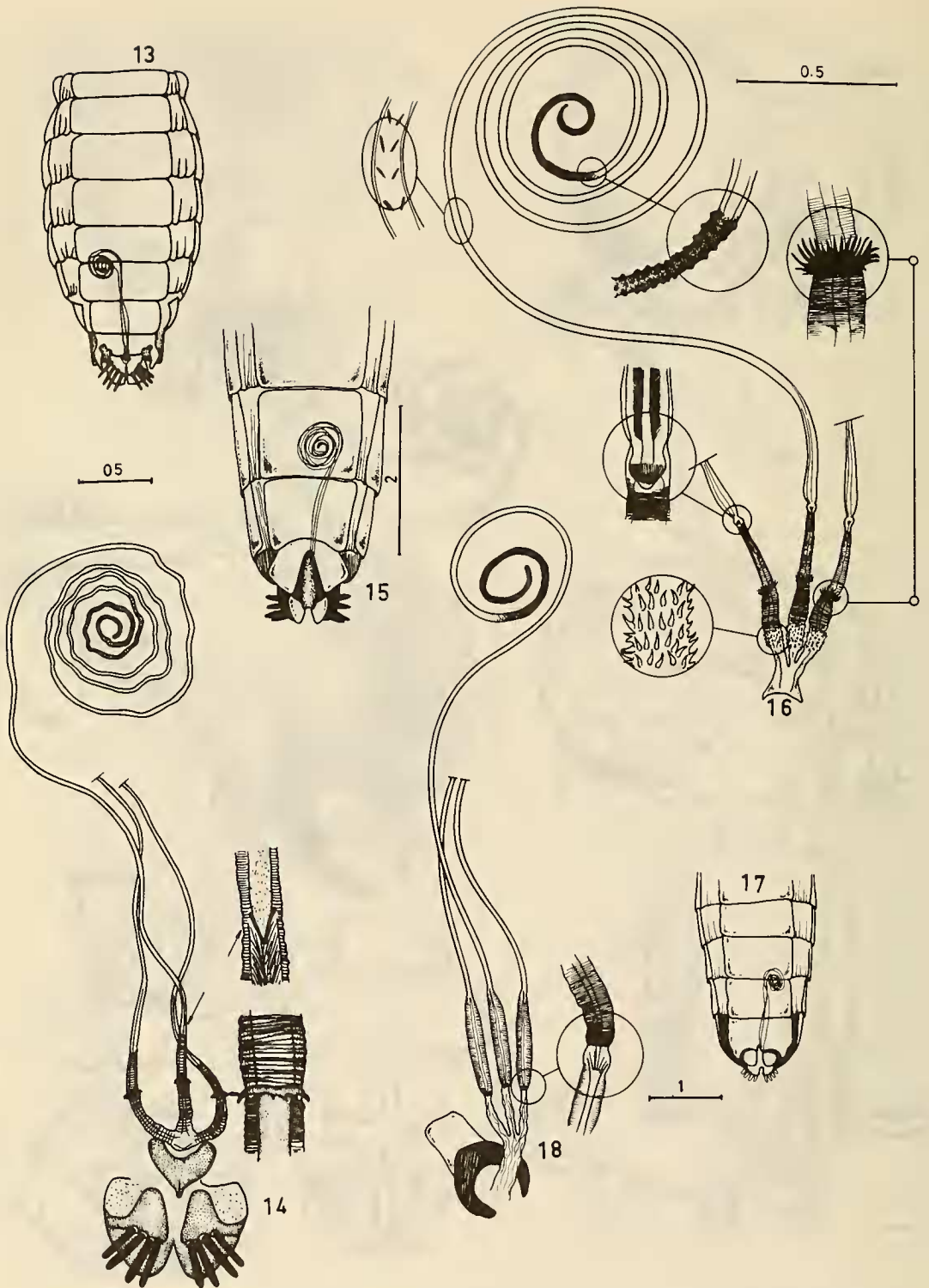
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Lasiopogon cinctus (Fabricius): 1. Situation of the spermathecae in the abdomen; 2. spermathecae.
Townsendia sp.: 3. situation of the spermathecae in the abdomen; 4. spermathecae.



Argyropogon argentinus, gen. n., sp. n.: 5. head, lateral view; 6. do., from above; 7. antenna; 8. thorax, from above; 9. hind leg; 10. male terminalia, lateral view; 11. do., ventral view; 12. do., dorsal view.



Argyropogon argentinus, gen. n., sp. n.: 13. situation of the spermathecae in the abdomen; 14. spermathecae.
Stichopogon trifasciatus (Say): 15. situation of the spermathecae in the abdomen; 16. spermathecae. *Lissoteles aquilonius* Martin: 17. situation of the spermathecae in the abdomen; 18. spermathecae.

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